

**SUPPLEMENTARY TABLE 2. Estimated vaccination coverage by age 24 months\* among children born 2016-2017,<sup>†</sup> by selected vaccines and doses, poverty level,<sup>§</sup> and Metropolitan Statistical Area (MSA) status<sup>¶</sup> -- National Immunization Survey-Child, United States 2017-2019**

Vaccine/Dose	Poverty Level		MSA status		
	At or above poverty (referent)	Below poverty	MSA, principal city (referent)	MSA, non-principal city	Non-MSA
	(n=19,867)	(n=5,155)	(n = 11,276)	(n = 10,000)	(n = 4,694)
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
<b>DTaP**</b>					
≥3 doses	94.8 (94.1-95.5)	89.7 (87.7-91.4)++	92.8 (91.6-93.9)	93.9 (92.7-94.9)	92.8 (91.4-94.1)
≥4 doses	83.7 (82.3-85.0)	72.8 (69.9-75.5)++	79.8 (77.9-81.7)	82.2 (80.4-84.0)	77.2 (74.7-79.7)
<b>Poliovirus (≥3 doses)</b>	93.4 (92.5-94.2)	89.2 (87.2-90.9)++	91.9 (90.7-93.0)	92.6 (91.3-93.7)	91.6 (90.0-93.0)
<b>MMR (≥1 dose)<sup>§§</sup></b>	92.0 (90.9-92.9)	87.1 (84.9-89.1)++	90.1 (88.6-91.5)	91.5 (90.1-92.7)	89.9 (88.2-91.6)
<b>Hib<sup>¶¶</sup></b>					
Primary series	93.7 (92.8-94.5)	89.0 (86.9-90.8)++	92.0 (90.7-93.2)	92.6 (91.3-93.9)	91.3 (89.0-93.2)
Full series	83.4 (82.2-84.7)	71.5 (68.5-74.4)++	79.0 (77.1-80.9)	81.3 (79.5-83.1)	77.5 (74.7-80.3)
<b>HepB</b>					
Birth dose <sup>***</sup>	76.5 (75.0-77.9)	77.0 (74.2-79.7)	75.3 (73.3-77.2)	77.6 (75.7-79.4)	75.5 (72.0-78.6)
≥3 doses	92.4 (91.4-93.3)	89.1 (87.2-90.9)++	90.5 (89.1-91.8)	92.2 (90.9-93.3)	91.7 (90.2-93.0)
<b>VAR (≥1 dose)<sup>§§</sup></b>	91.4 (90.4-92.4)	86.6 (84.4-88.7)++	89.4 (87.9-90.9)	90.9 (89.5-92.1)	89.3 (87.5-90.9)
<b>PCV</b>					
≥3 doses	93.3 (92.4-94.2)	88.1 (86.1-89.9)++	91.3 (90.0-92.5)	92.2 (90.9-93.5)	90.8 (88.5-92.8)
≥4 doses	85.2 (83.9-86.4)	73.6 (70.8-76.3)++	80.7 (78.8-82.5)	83.4 (81.6-85.1)++	78.9 (76.1-81.6)
<b>HepA</b>					
≥1 dose	87.1 (85.9-88.3)	82.7 (80.3-85.0)++	86.0 (84.3-87.6)	86.3 (84.8-87.9)	82.9 (80.3-85.3)++
≥2 doses (by 35 months)	78.2 (76.3-80.1)	74.1 (70.3-77.9)	77.4 (74.9-79.8)	77.2 (74.5-79.7)	73.6 (69.4-77.6)
<b>Rotavirus (by 8 months)<sup>†††</sup></b>	79.8 (78.5-81.1)	65.1 (62.2-67.9)++	74.8 (72.9-76.6)	77.7 (75.7-79.5)++	68.5 (65.0-71.8)++
<b>Influenza (≥2 doses)<sup>§§§</sup></b>	63.2 (61.6-64.9)	46.6 (43.7-49.7)++	58.0 (55.9-60.2)	60.8 (58.6-63.0)	48.3 (45.1-51.6)++
<b>Combined 7-vaccine series<sup>¶¶¶</sup></b>	74.1 (72.5-75.6)	62.0 (59.0-65.0)++	69.3 (67.2-71.4)	72.4 (70.3-74.4)++	68.1 (65.0-71.1)
<b>No vaccinations</b>	1.2 (1.0-1.4)	1.1 (0.8-1.5)	1.1 (0.8-1.4)	1.1 (0.8-1.4)	2.0 (1.4-2.8)++

**Abbreviations:** CI = confidence interval; DTaP = diphtheria, tetanus toxoids, and acellular pertussis vaccine; HepA = hepatitis A vaccine; HepB = hepatitis B vaccine; Hib = *Haemophilus influenzae* type b conjugate vaccine; MMR = measles, mumps, and rubella vaccine; PCV = pneumococcal conjugate vaccine; VAR = varicella vaccine.

\* Includes vaccinations received by age 24 months (before the day the child turns 24 months), except for the HepB birth dose, rotavirus vaccination, and ≥2 HepA doses by 35 months. For all vaccines except the HepB birth dose and rotavirus vaccination, the Kaplan-Meier method was used to estimate vaccination coverage to account for children whose vaccination history was

ascertained before age 24 months (35 months for  $\geq 2$  HepA doses).

<sup>†</sup> Data for the 2016 birth year are from survey years 2017, 2018, and 2019; data for the 2017 birth year are considered preliminary and come from survey years 2018 and 2019 (data from survey year 2020 are not yet available).

<sup>§</sup> Children were classified as below the federal poverty level if their total family income was less than the poverty threshold specified for the applicable family size and number of children aged <18 years. Children with total family income at or above the poverty threshold specified for the applicable family size and number of children aged < 18 years were classified as at or above the poverty level. A total of 982 children with adequate provider data and missing data on income were excluded from the analysis. Poverty level was based on 2014 and 2015 U.S. Census poverty thresholds.

<sup>¶</sup> MSA status was determined based on household-reported county and city of residence and was grouped into three categories: MSA principal city, MSA non-principal city, and non-MSA. MSA and principal city were as defined by the U.S. Census Bureau ([https://www.census.gov/geo/reference/gtc/gtc\\_cbsa.html](https://www.census.gov/geo/reference/gtc/gtc_cbsa.html)). Non-MSA areas include urban populations not located within an MSA as well as completely rural areas.

<sup>\*\*</sup> Includes children who may have been vaccinated with diphtheria and tetanus toxoids vaccine or diphtheria, tetanus toxoids, and pertussis vaccine.

<sup>††</sup> Statistically significant ( $p < 0.05$ ) difference compared with the referent group.

<sup>§§</sup> Includes children who may have been vaccinated with measles, mumps, rubella, and varicella combination vaccine.

<sup>¶¶</sup> Hib primary series: receipt of  $\geq 2$  or  $\geq 3$  doses, depending on product type received; full series: primary series and booster dose, which includes receipt of  $\geq 3$  or  $\geq 4$  doses, depending on product type received.

<sup>\*\*\*</sup> One dose HepB administered from birth through age 3 days.

<sup>†††</sup> Includes  $\geq 2$  doses of Rotarix monovalent rotavirus vaccine (RV1), or  $\geq 3$  doses of RotaTeq pentavalent rotavirus vaccine (RV5). (if any dose in the series is RotaTeq or unknown, default to the 3-dose series.) The maximum age for the final rotavirus dose is 8 months, 0 days.

<sup>§§§</sup> Doses must be at least 24 days apart (four weeks with a four-day grace period); doses could have been received during two influenza seasons.

<sup>¶¶¶</sup> The combined 7-vaccine series (4:3:1:3\*:3:1:4) includes  $\geq 4$  doses of DTaP,  $\geq 3$  doses of poliovirus vaccine,  $\geq 1$  dose of measles-containing vaccine, the full series of Hib ( $\geq 3$  or  $\geq 4$  doses, depending on product type),  $\geq 3$  doses of HepB,  $\geq 1$  dose of VAR, and  $\geq 4$  doses of PCV.